

REMARKS

Claims 1, 3-10, 12-25 and 27-29 were examined by the Office, and in the Office Action of July 14, 2009 all claims are rejected. With this response, claims 1, 3, 4, 6, 8-10, 12, 16, 20, 22-25 and 27-28 are amended. The claims are amended to even better indicate how the video sequence identification is arranged to be used and how the identifiers are different from identifiers known in the field. Applicant respectfully submits that no new matter is added. Applicant respectfully requests reconsideration and withdrawal of the rejections in view of the following discussion.

Claim Rejections Under § 102

In section 4, on page 2 of the Office Action, claims 1-16 and 20-29 are rejected under 35 U.S.C. § 102(b) as anticipated by Setogawa et al. (U.S. Patent No. 5,822,024). The Examiner refers to the “closed GOP” to be the same as the video sequence identifier of the applicant. The “closed GOP” flag of “GOP Header” in Setogawa is a one-bit flag for indicating a closed GOP. Such a one-bit field cannot be used for identifying a video sequence, since such a field can have only two possible values (0 or 1), and if two consecutive GOPs are both closed GOPs, they both have the same value of the “closed GOP” field, and it thus cannot be used to identify which pictures belong to the same group of pictures, as claimed in the present application.

The applicant has previously argued that the “start code” in the GOP header cannot be used to identify which pictures belong to the same group of pictures. This is because it is known in the field of video coding that a GOP start code is a fixed code to indicate a start of a GOP. It therefore lacks the ability to vary and cannot be used to identify which pictures belong to which GOP.

In order to differentiate from the “GOP Header” and “closed GOP” flag even more clearly, the applicant has amended claim one to recite “each picture of the at least one group of pictures has a distinct video sequence identification separate from the picture identification associated to the picture”. In Setogawa, there is no distinct video sequence identifier for each picture of the at least one group of pictures.

Applicant respectfully submits that claim 1 is not disclosed or suggested by Setogawa, because Setogawa fails to disclose or suggest all of the limitations recited in claim 1. Setogawa

at least fails to disclose or suggest that the video sequence identification associated to the picture is arranged to be used for determining which pictures belong to the same group of pictures, as recited in claim 1. This is because there is no element in Setogawa that could be used for such purpose. The GOP Header of Setogawa is associated with the whole GOP, not any individual pictures. Therefore, for at least this reason, claim 1 is not disclosed or suggested by Setogawa.

Setogawa is related to a method and apparatus for coding a picture sequence, whereby the sequence may comprise I-pictures, P-pictures and B-pictures accommodated as groups of pictures (GOPs). In particular, Setogawa discloses a method of coding groups of pictures whereby the pictures within each group are independent from pictures contained within other GOPs. For example, each picture contained within a GOP relies solely on other pictures within the same GOP for prediction thereof. This allows scenes to be cut from the encoded stream at the granularity of a GOP, and the effect of the cut pictures is not propagated into the next proceeding GOP. In order to achieve this effect the method disclosed by Setogawa comprises replacing the picture immediately following a cut scene with that of an I-picture.

In contrast to Setogawa, claim 1 has that each at picture of at least one group of pictures has an associated a video sequence identification separate from the picture identification for the encoded pictures, the video sequence identification has the same value for each picture of the same group of pictures, and the video sequence identification is arranged to be used for determining which pictures belong to the same group of pictures. The Office asserts that Figures 6A to 6C of Setogawa disclose the feature of claim 1 regarding “the video sequence identification is arranged to be used for determining which pictures belong to the same group of pictures.” Figures 6A to 6C show the configuration of a bit stream on the MPEG standard, the configuration of a GOP, and the contents of the GOP header and picture header. However, the GOP header, including the GROUP START CODE and CLOSED GOP, does not correspond to the video sequence identification recited in claim 1. These fields cannot be used for identifying which pictures belong to which GOP. These fields are also only associated with the whole GOP, not individual pictures.

The GROUP START CODE is known in video coding to be a fixed predetermined 32 bit number for all groups, and is used as a marker in order to signify the start of a new GOP. This value cannot therefore be used to determine which pictures belong to the same group of pictures,

as is performed by the video sequence identification value from claim 1, since the GROUP START CODE lacks the ability to vary from one group of pictures to the next. Instead, the GROUP START CODE would identify every picture as being part of every group of pictures. Therefore, the GROUP START CODE and the GOP heading cannot correspond to the video sequence identification recited in claim 1.

The CLOSED GOP in the GOP header of Setogawa is a one-bit flag (see Fig. 6B) that is used to indicate a closed GOP. This flag cannot be used to differentiate between two successive closed GOPs, since they would have the same value of the CLOSED GOP flag. This CLOSED GOP value cannot therefore be used to determine which pictures belong to the same group of pictures, as is performed by the video sequence identification value from claim 1. Therefore, the CLOSED GOP and the GOP heading cannot correspond to the video sequence identification recited in claim 1.

By using the video sequence identification separate from the picture identification there is no requirement to maintain a check on the picture stream to detect when a specific GOP begins, as the sequence identification is able to identify which picture belongs to the same group of pictures. The disclosure of Setogawa does not provide for this advantage of the present invention.

In addition, the Office asserts that the Sequence Layer shown in Figure 6A of Setogawa discloses that the video sequence identification is arranged to be used for determining which pictures belong to the same group of pictures, as recited in claim 1. See Setogawa column 6, lines 46-52 and column 7, lines 38-40. However, the applicant respectfully submits that the Sequence Layer does not teach this feature of claim 1. Instead, Setogawa discloses a Sequence Layer comprising a series of GOPs that are demarked by a Sequence Header and Sequence End. Setogawa states the sequence layer is the uppermost layer and includes a series of a plurality of GOPs. See Setogawa column 7, lines 38-40. Therefore, the Sequence Layer in Setogawa is used to group a series of GOPs and not a series of pictures within the same group, as recited in claim 1. For at least the reasons discussed above, claim 1 is not disclosed or suggested by the cited references.

Independent claims 6 and 8-10 contain limitations similar to claim 1, and therefore for at least for the reasons discussed above in relation to claim 1, these independent claims are not disclosed or suggested by Setogawa.

The claims depending from the independent claims listed above are also not disclosed or suggested by Setogawa at least in view of their dependencies.

The Applicant has amended claim 12 to even better distinguish from Setogawa. Claim 12 now recites that “the first and second transmission units being units adapted for network transmission and being different from video coding units of the first and second encoded picture”, and that “the first and the second identifiers being different from the video coding units of the first and the second encoded picture”. This makes it very clear that Setogawa does not disclose the features of claim 12, since Setogawa only speaks of “GOP Header” and the like elements that are video coding units, not any transmission units adapted for network transmission. Consequently, Setogawa does not disclose identifiers being different from video coding units that would be indicative of the respective decoding order of information included in the transmission units.

Independent claims 16, 20, 22-25 and 27-28 contain limitations similar to claim 12, and therefore for at least for the reasons discussed above in relation to claim 12, these independent claims are not disclosed or suggested by Setogawa.

The claims depending from the independent claims listed above are also not disclosed or suggested by Setogawa at least in view of their dependencies.

Claim Rejections Under § 103

In section 7, on page 7 of the Office Action, claims 17 and 19 are rejected under 35 U.S.C. § 103(a) as unpatentable over Setogawa in view of Bigham et al. (U.S. Patent No. 5,677,905). Claims 17 and 19 ultimately depend from independent claim 16, and Bigham fails to make up for the deficiencies in the teachings of Setogawa identified above. Therefore, claims 17 and 19 are not disclosed or suggested by the cited references at least in view of their dependencies.

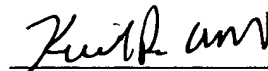
In section 8, on page 8 of the Office Action, claim 18 is rejected under 35 U.S.C. § 103(a) as unpatentable over Setogawa in view of Watkins (U.S. Publ. Appl. No. 2004/0039796). Claim 18 ultimately depends from independent claim 16, and Watkins fails to make up for the deficiencies in the teachings of Setogawa identified above. Therefore, claim 18 is not disclosed or suggested by the cited references at least in view of its dependency.

Conclusion

In view of the foregoing, it is respectfully submitted that the present application is in condition for allowance and such action is earnestly solicited. The undersigned hereby authorizes the Commissioner to charge Deposit Account No. 23-0442 for any fee deficiency required to submit this response.

Respectfully submitted,

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